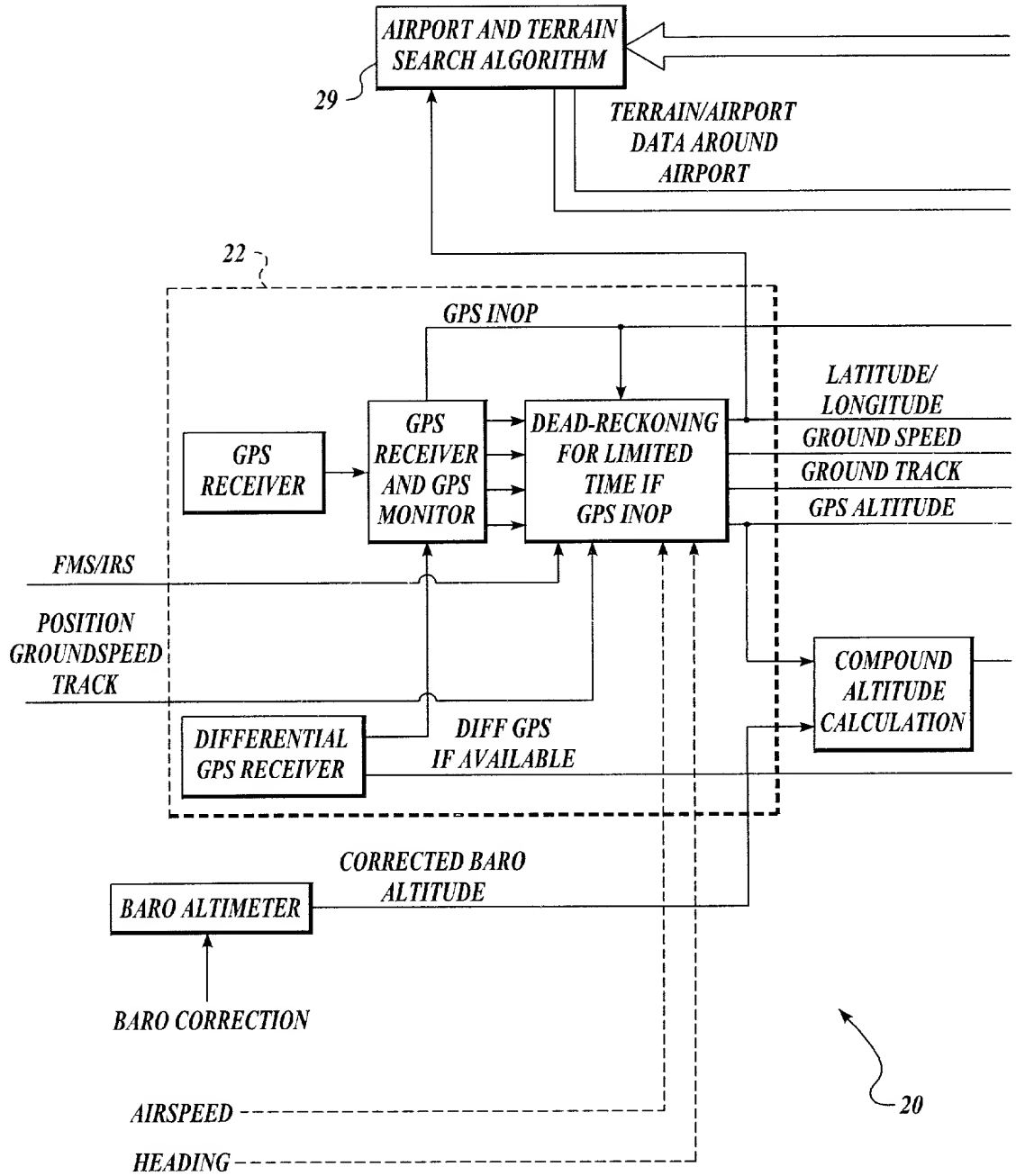
AIRPORT AND TERRAIN SEARCH ALGORITHM
29
TERRAIN/AIRPORT DATA AROUND AIRPORT
22
GPS INOP
LATITUDE/ LONGITUDE
GPS RECEIVER
GPS RECEIVER AND GPS MONITOR
DEAD-RECKONING FOR LIMITED TIME IF GPS INOP
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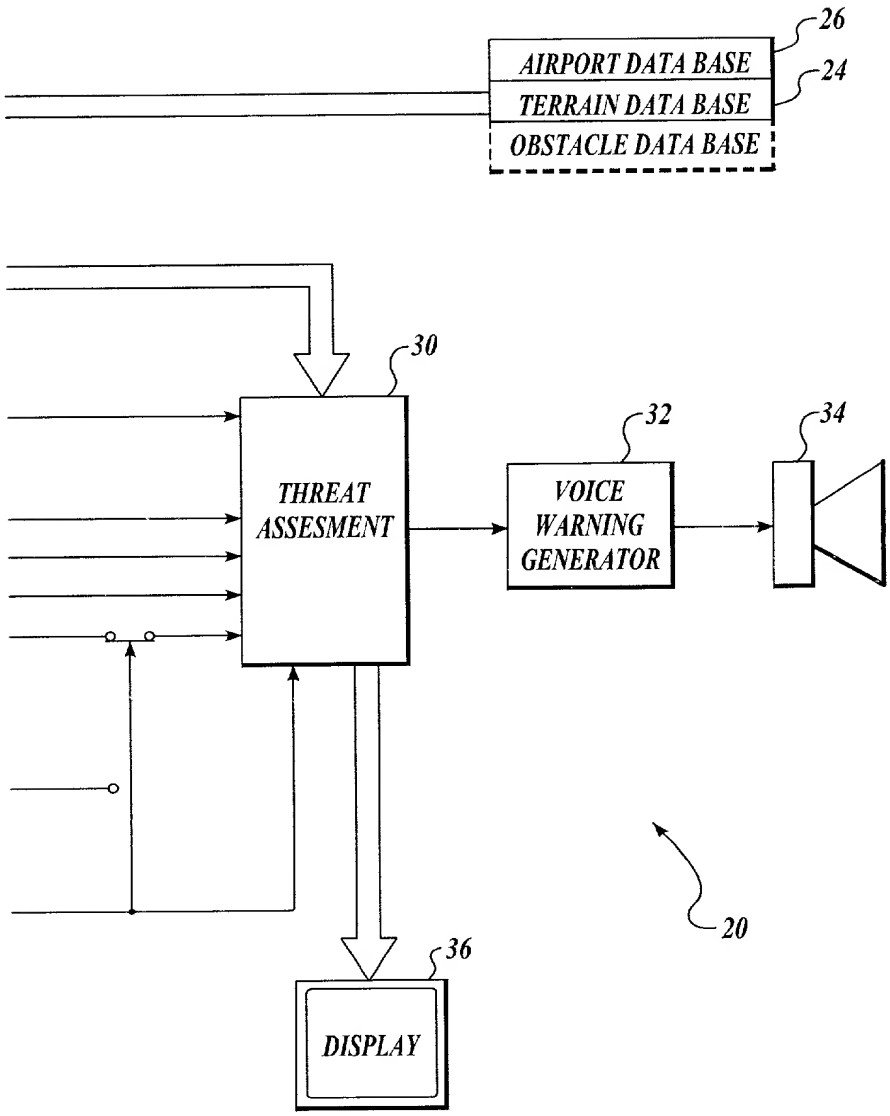
GROUND TRACK
GPS ALTITUDE
FMS/IRS
POSITION GROUNDSPEED TRACK
COMPOUND ALTITUDE CALCULATION
DIFFERENTIAL GPS RECEIVER
DIFF GPS IF AVAILABLE
CORRECTED BARO ALTITUDE
BARO ALTIMETER
BARO CORRECTION
20
AIRSPEED
HEADING

Fig. 1A.


AIRPORT DATA BASE
TERRAIN DATA BASE
OBSTACLE DATA BASE
26
24
30
THREAT ASSESMENT
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VOICE WARNING GENERATOR
34
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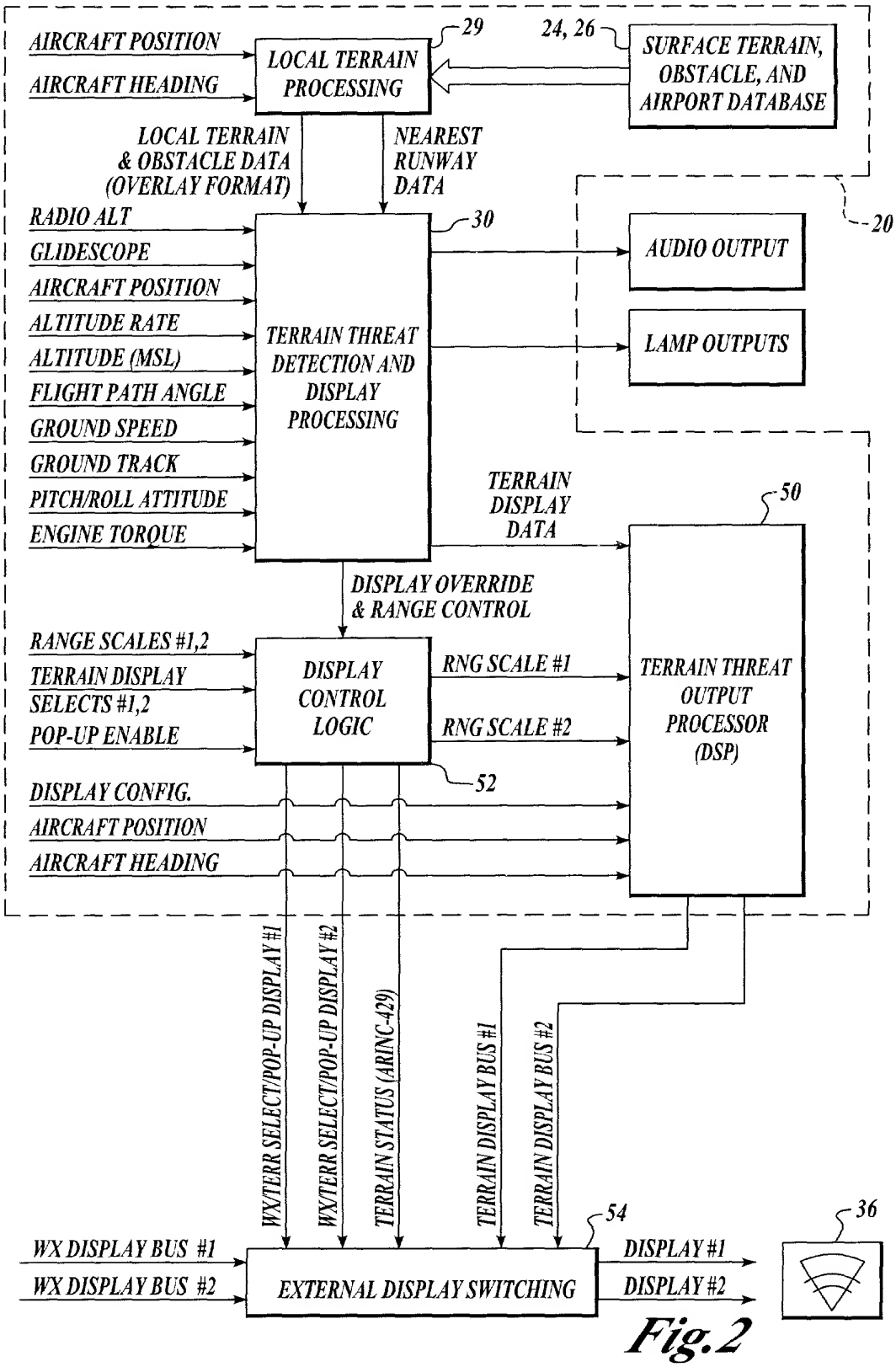
20

Fig. 1B.


AIRCRAFT POSITION
AIRCRAFT HEADING
LOCAL TERRAIN PROCESSING
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LOCAL TERRAIN & OBSTACLE DATA (OVERLAY FORMAT)
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20
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GLIDESCOPE
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ALTITUDE RATE
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FLIGHT PATH ANGLE
GROUND SPEED
GROUND TRACK
PITCH/ROLL ATTITUDE
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30
TERRAIN THREAT DETECTION AND DISPLAY PROCESSING
AUDIO OUTPUT
LAMP OUTPUTS
TERRAIN DISPLAY DATA
50
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TERRAIN DISPLAY SELECTS #1,2
POP-UP ENABLE
DISPLAY CONTROL LOGIC
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RNG SCALE #2
TERRAIN THREAT OUTPUT PROCESSOR (DSP)
52
DISPLAY CONFIG.
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AIRCRAFT HEADING
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WX/TERR SELECT/POP-UP DISPLAY #2
TERRAIN STATUS (ARINC-429)
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TERRAIN DISPLAY BUS #2
54
36
WX DISPLAY BUS #1
WX DISPLAY BUS #2
EXTERNAL DISPLAY SWITCHING
DISPLAY #1
DISPLAY #2

Fig.2

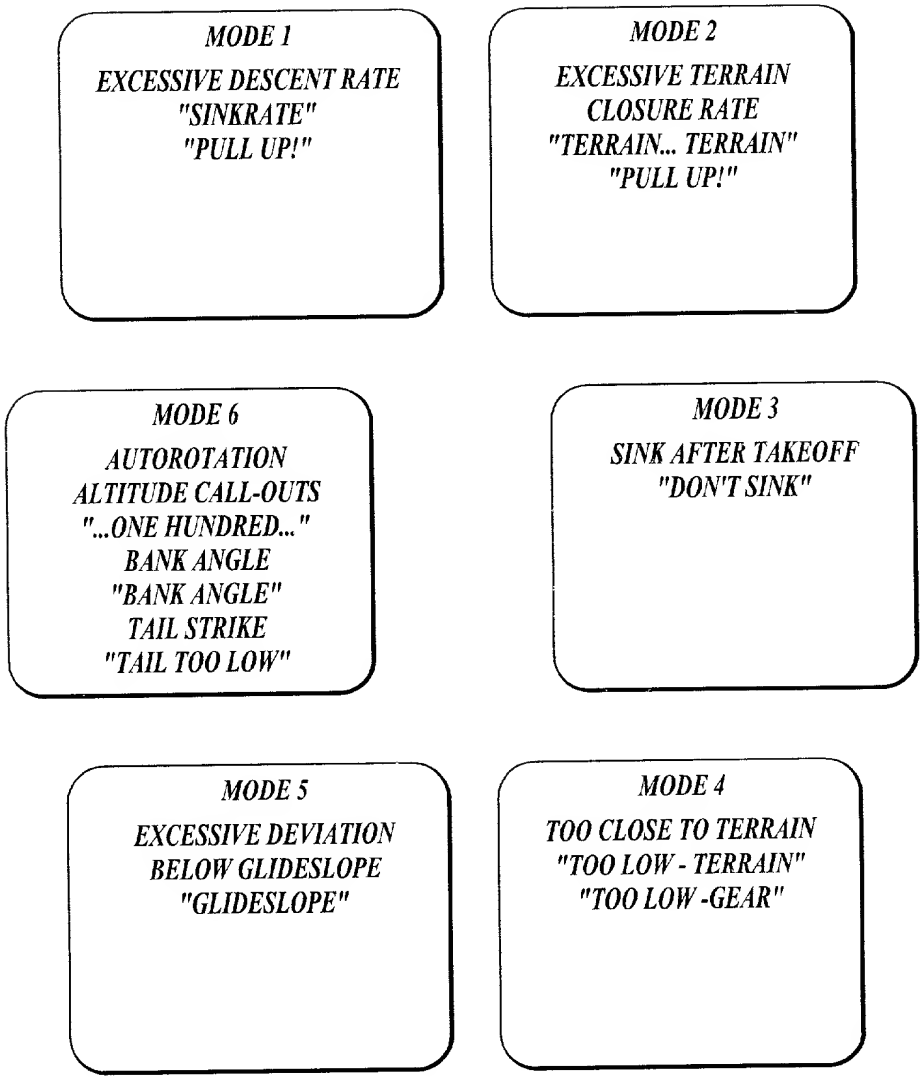
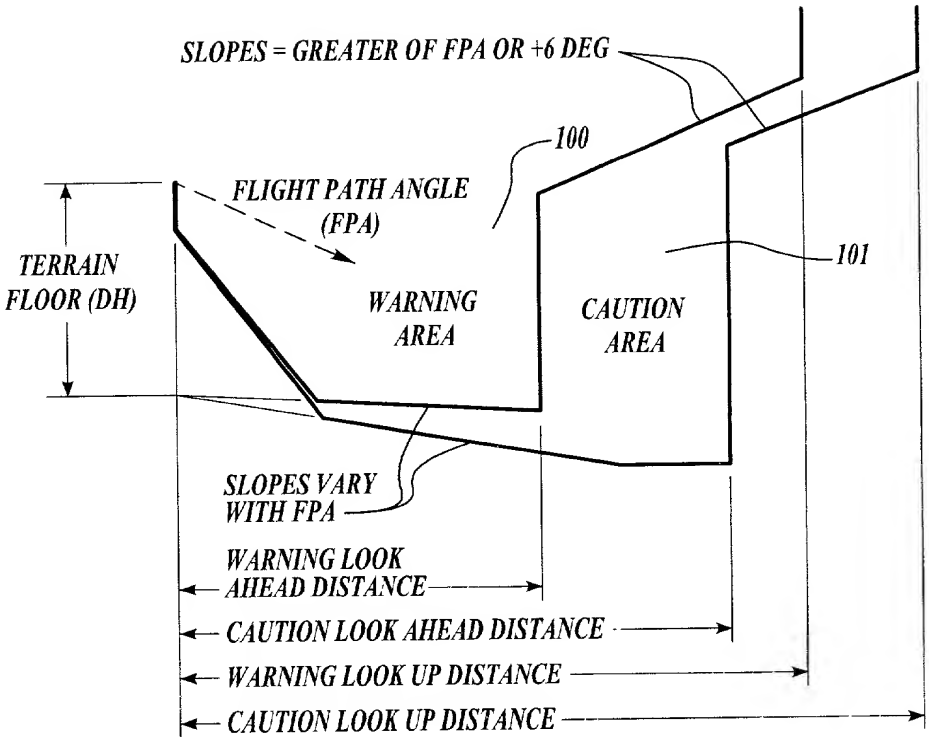

MODE 1
EXCESSIVE DESCENT RATE
"SINKRATE"
"PULL UP!"
MODE 2
EXCESSIVE TERRAIN
CLOSURE RATE
"TERRAIN... TERRAIN"
"PULL UP!"
MODE 6
AUTOROTATION
ALTITUDE CALL-OUTS
"...ONE HUNDRED..."
BANK ANGLE
"BANK ANGLE"
TAIL STRIKE
"TAIL TOO LOW"
MODE 3
SINK AFTER TAKEOFF
"DON'T SINK"
MODE 5
EXCESSIVE DEVIATION
BELOW GLIDESLOPE
"GLIDESLOPE"
MODE 4
TOO CLOSE TO TERRAIN
"TOO LOW - TERRAIN"
"TOO LOW -GEAR"

Fig.3



LOOK AHEAD DISTANCES VARY WITH GROUND SPEED AND DISTANCE TO RUNWAY
TERRAIN FLOOR VARIES WITH DISTANCE TO RUNWAY

Fig. 4

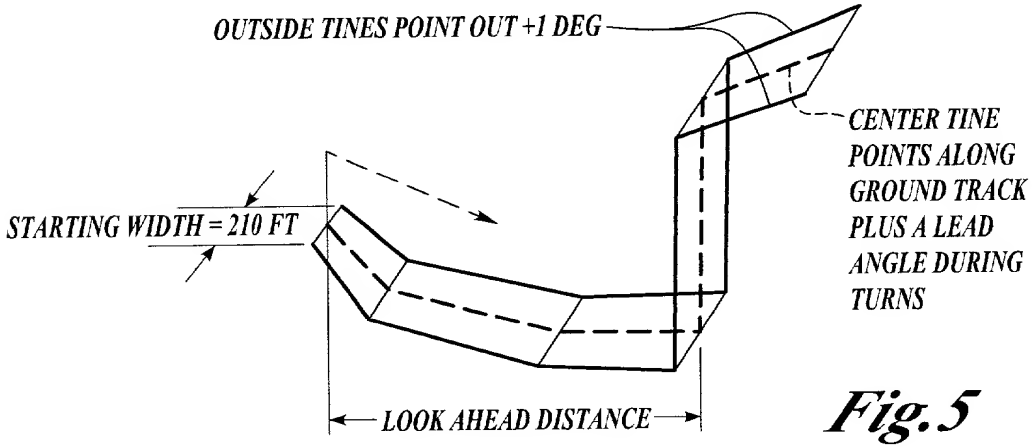


Fig. 5

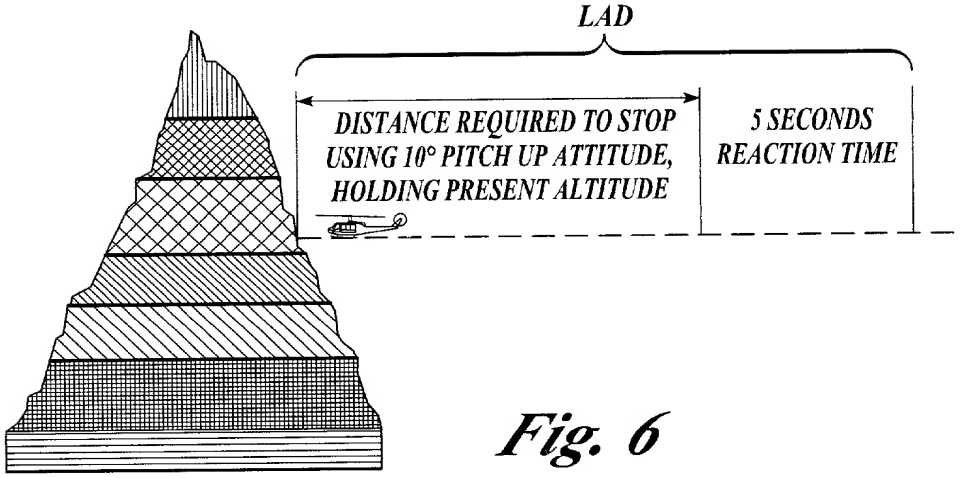


Fig. 6

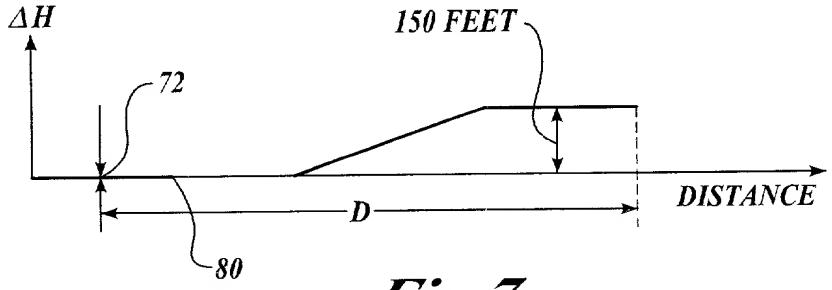


Fig. 7

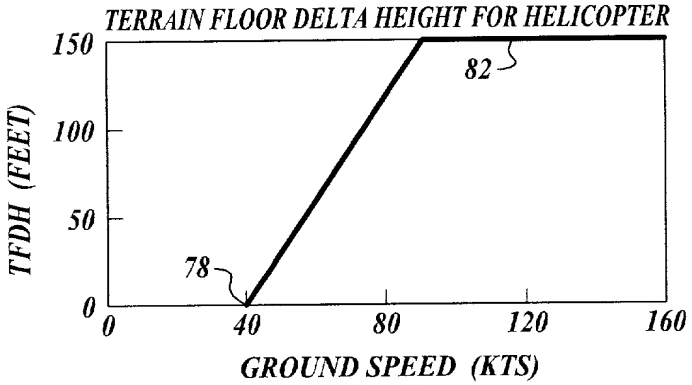


Fig. 8

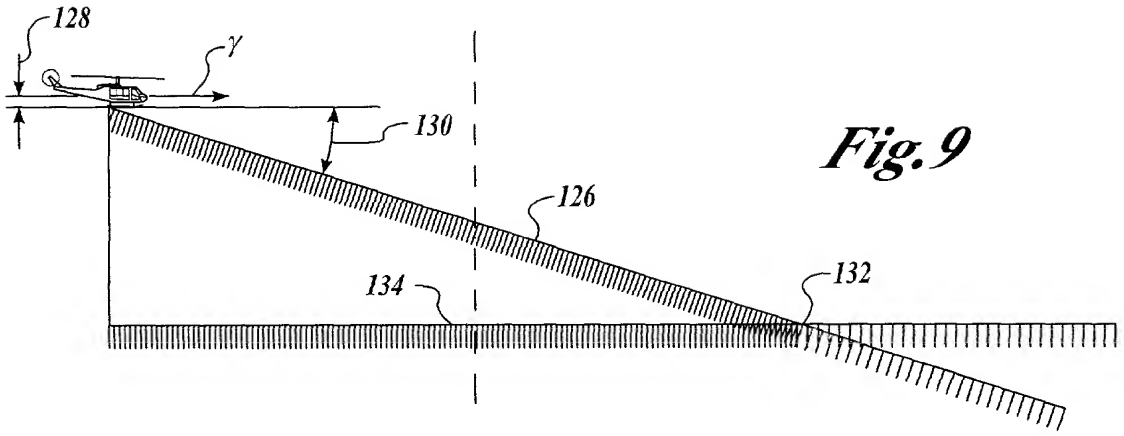


Fig. 9

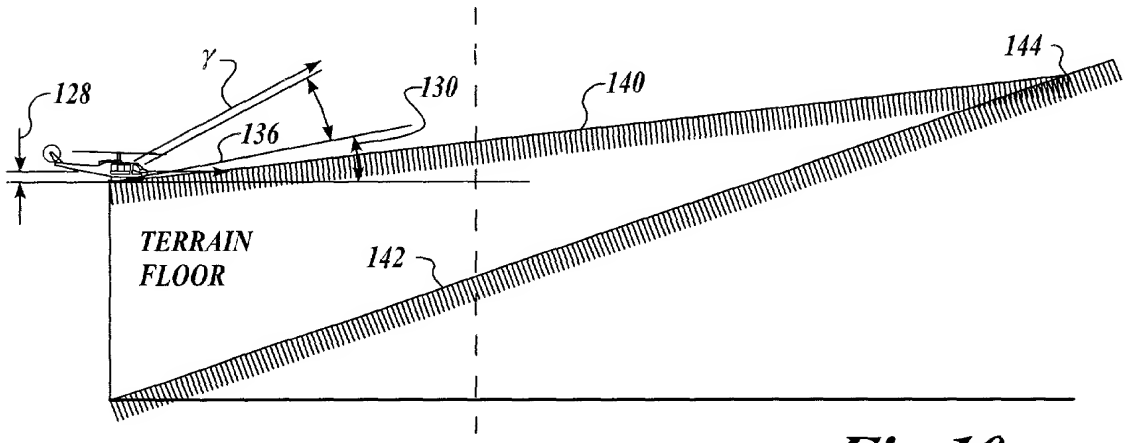


Fig. 10

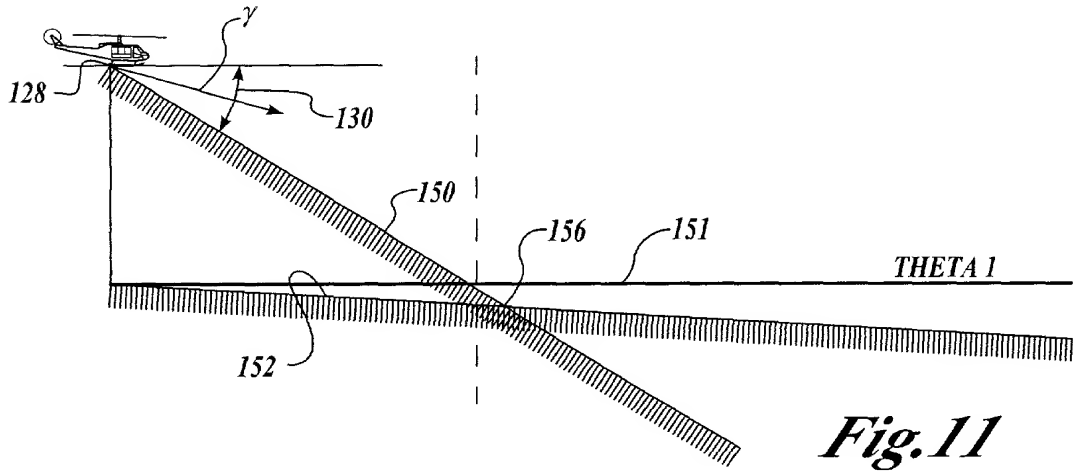
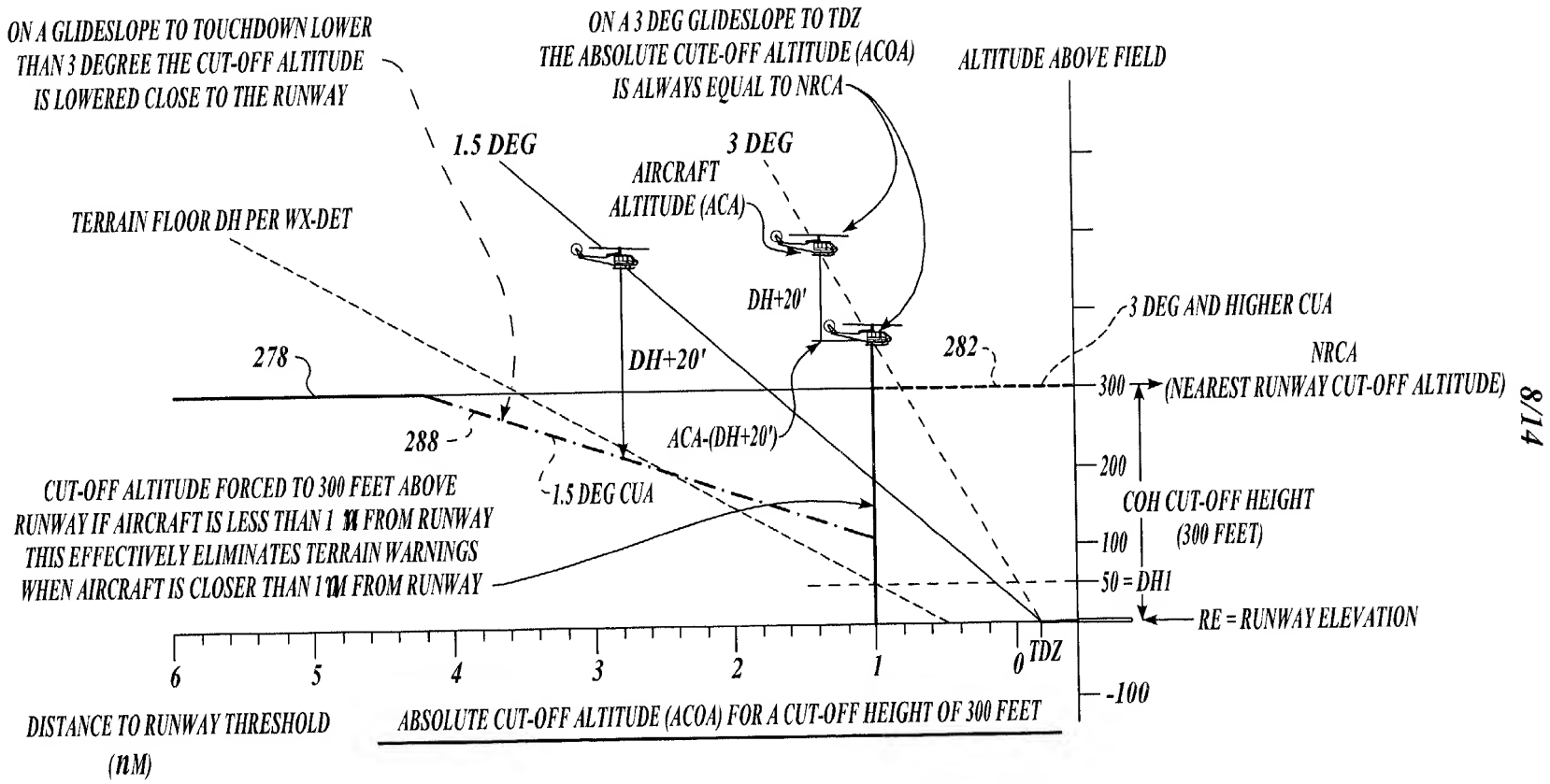


Fig. 11

Translation Services



8/14

Fig.12

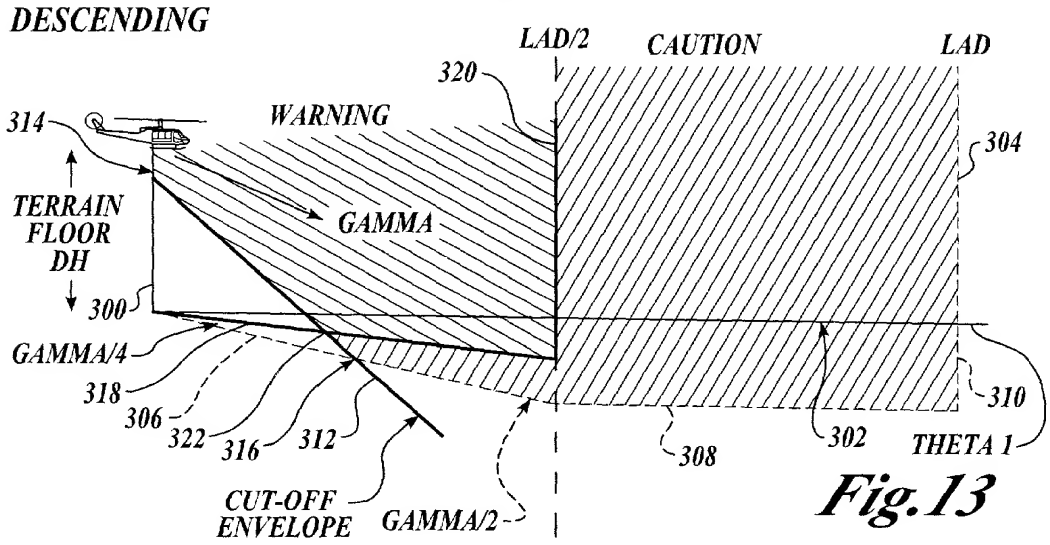


Fig.13

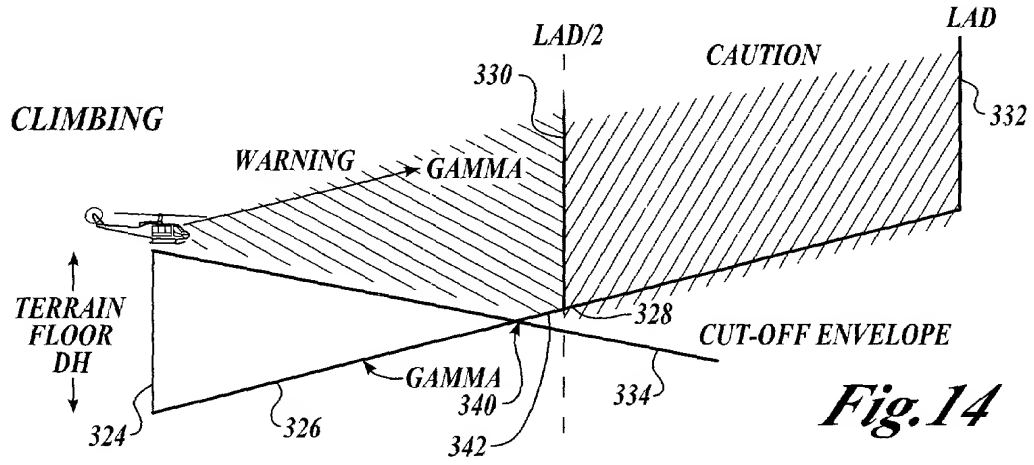


Fig.14

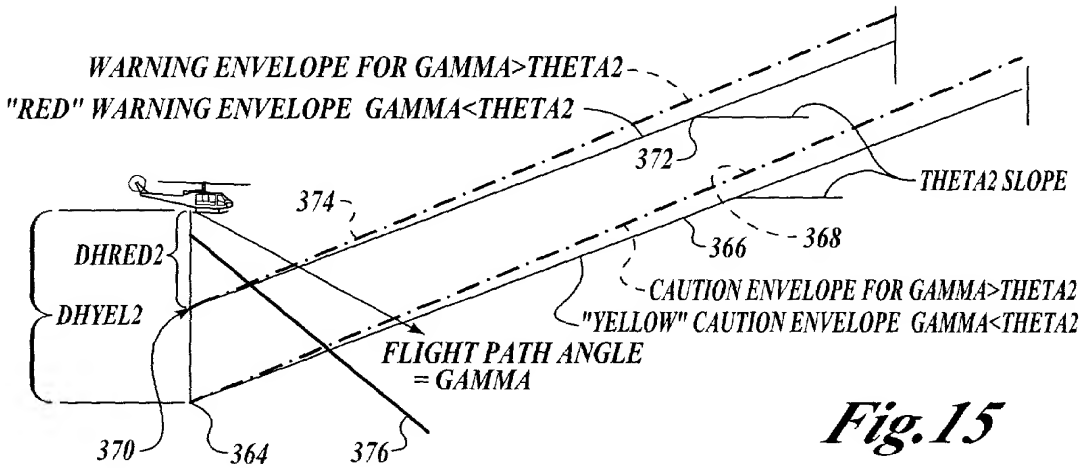


Fig.15

TOSHIBA RESTRICTED

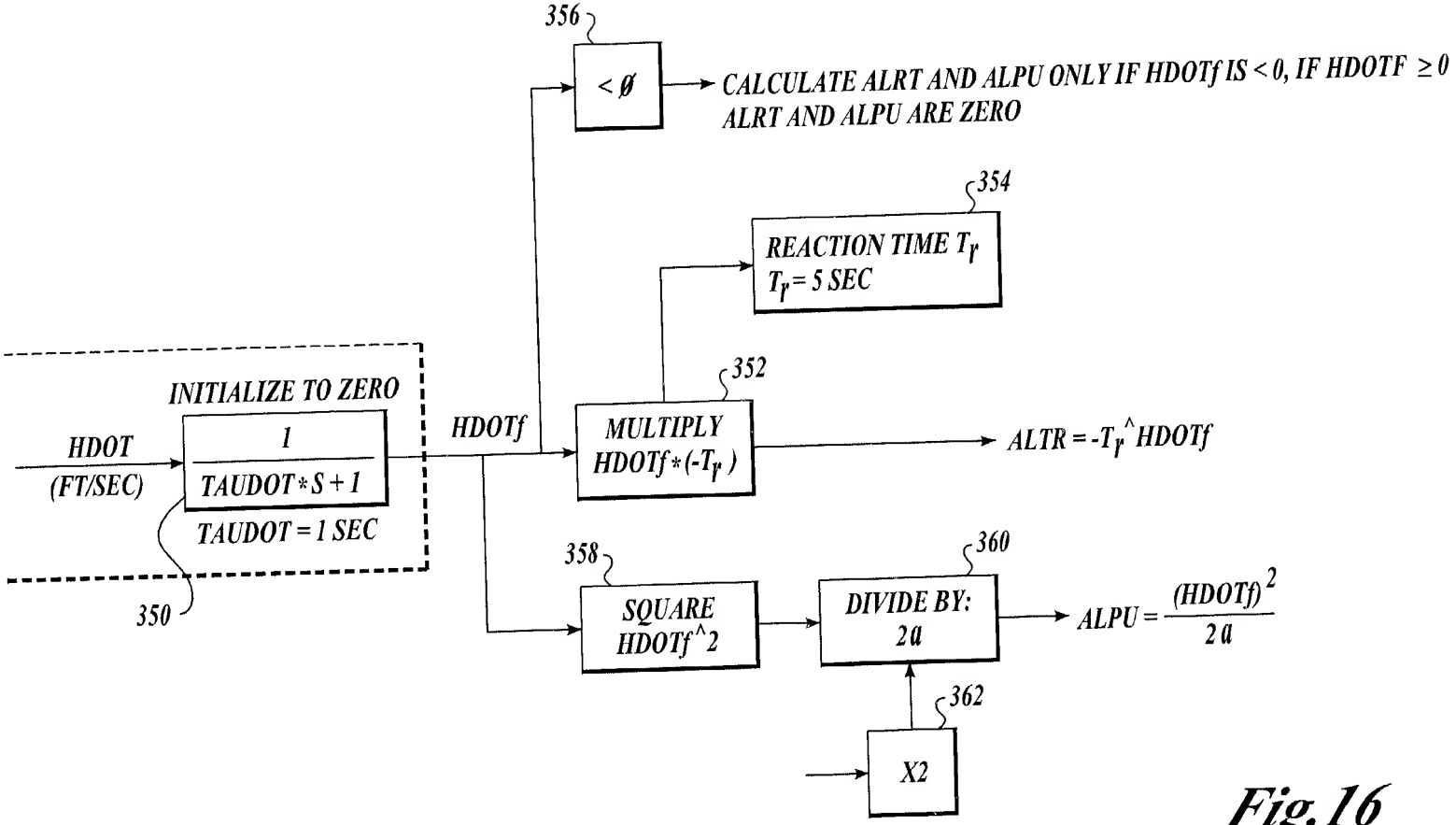


Fig.16

Translation Services

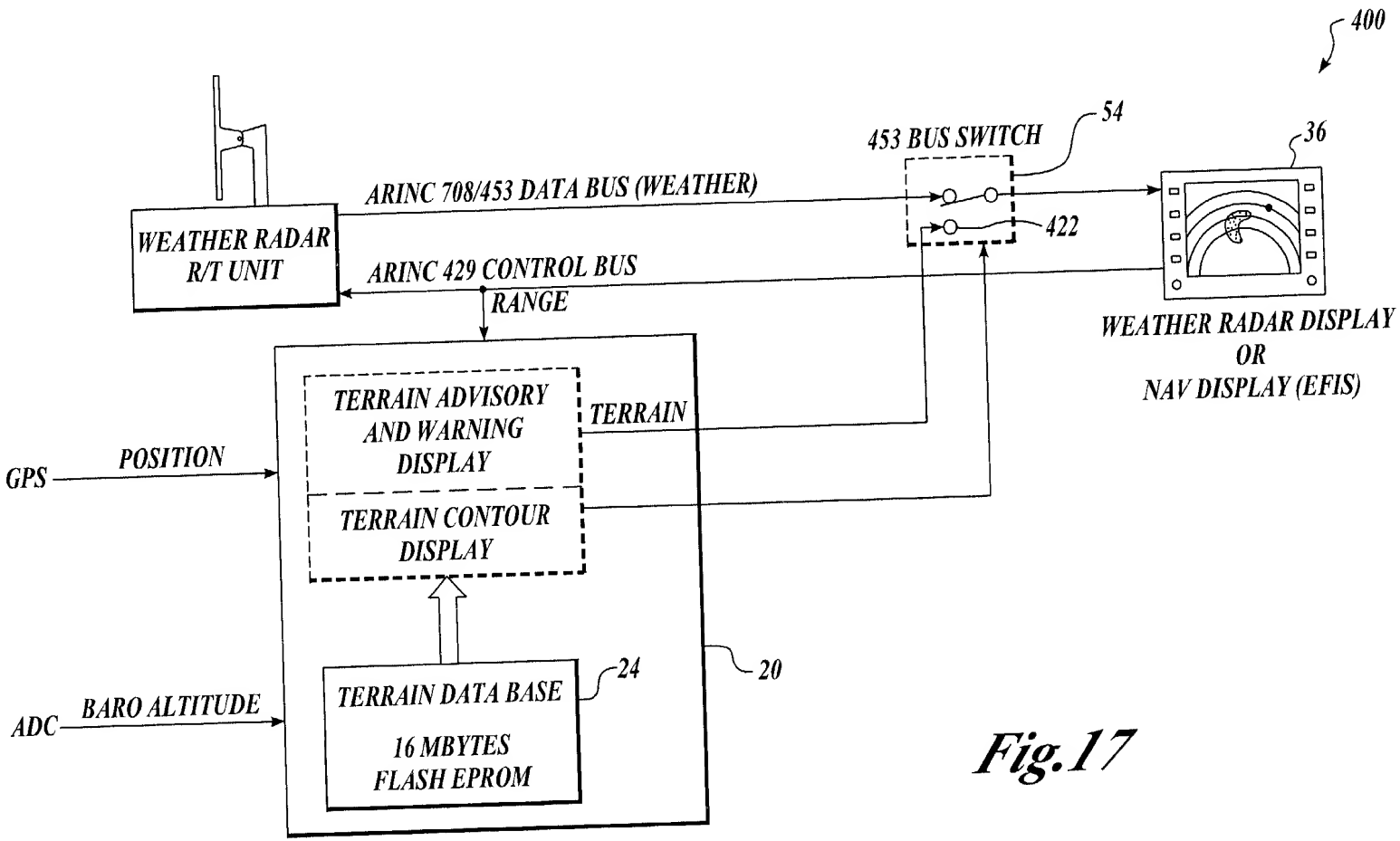


Fig. 17

TOSCO EES9860

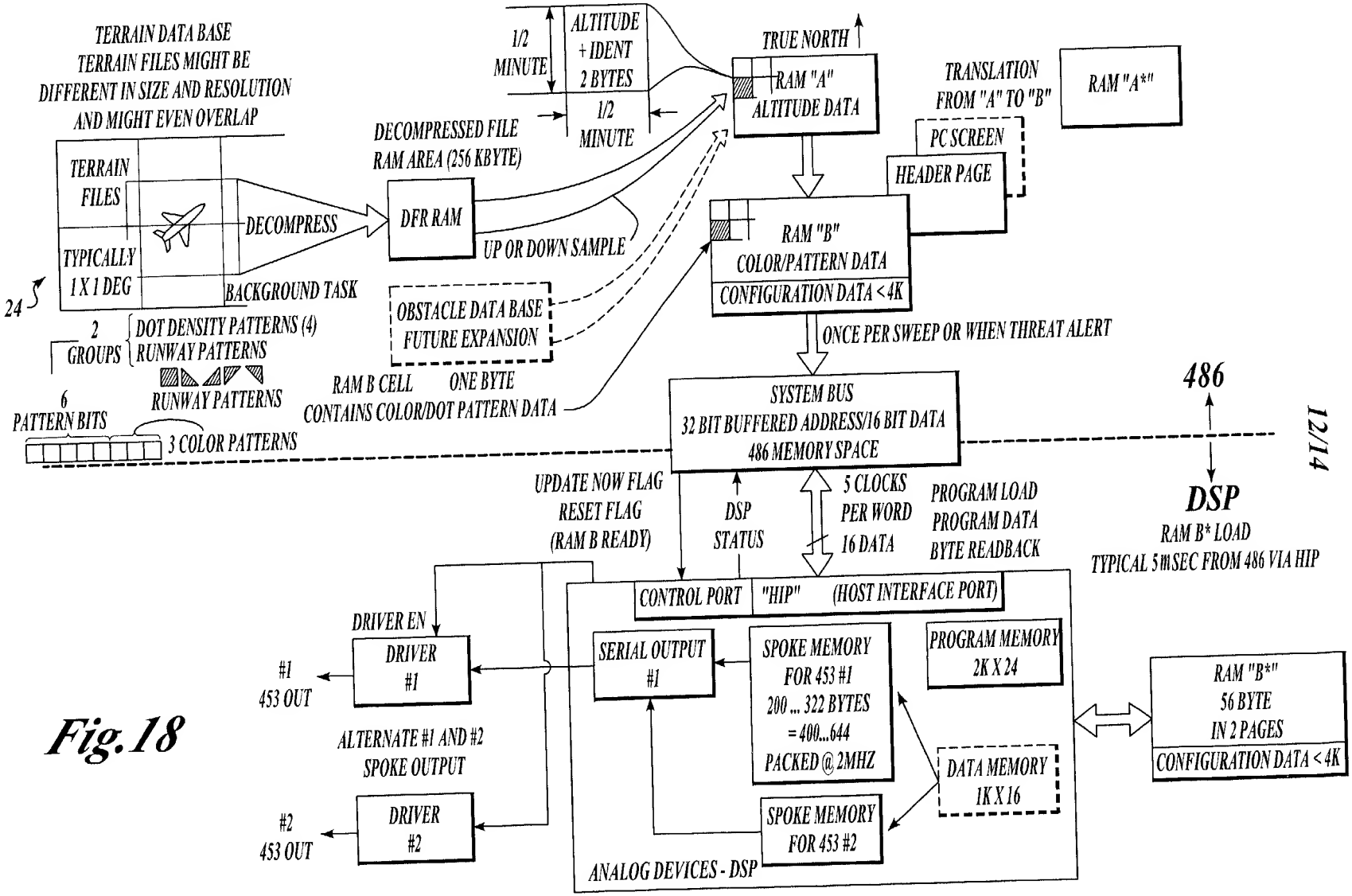


Fig. 18

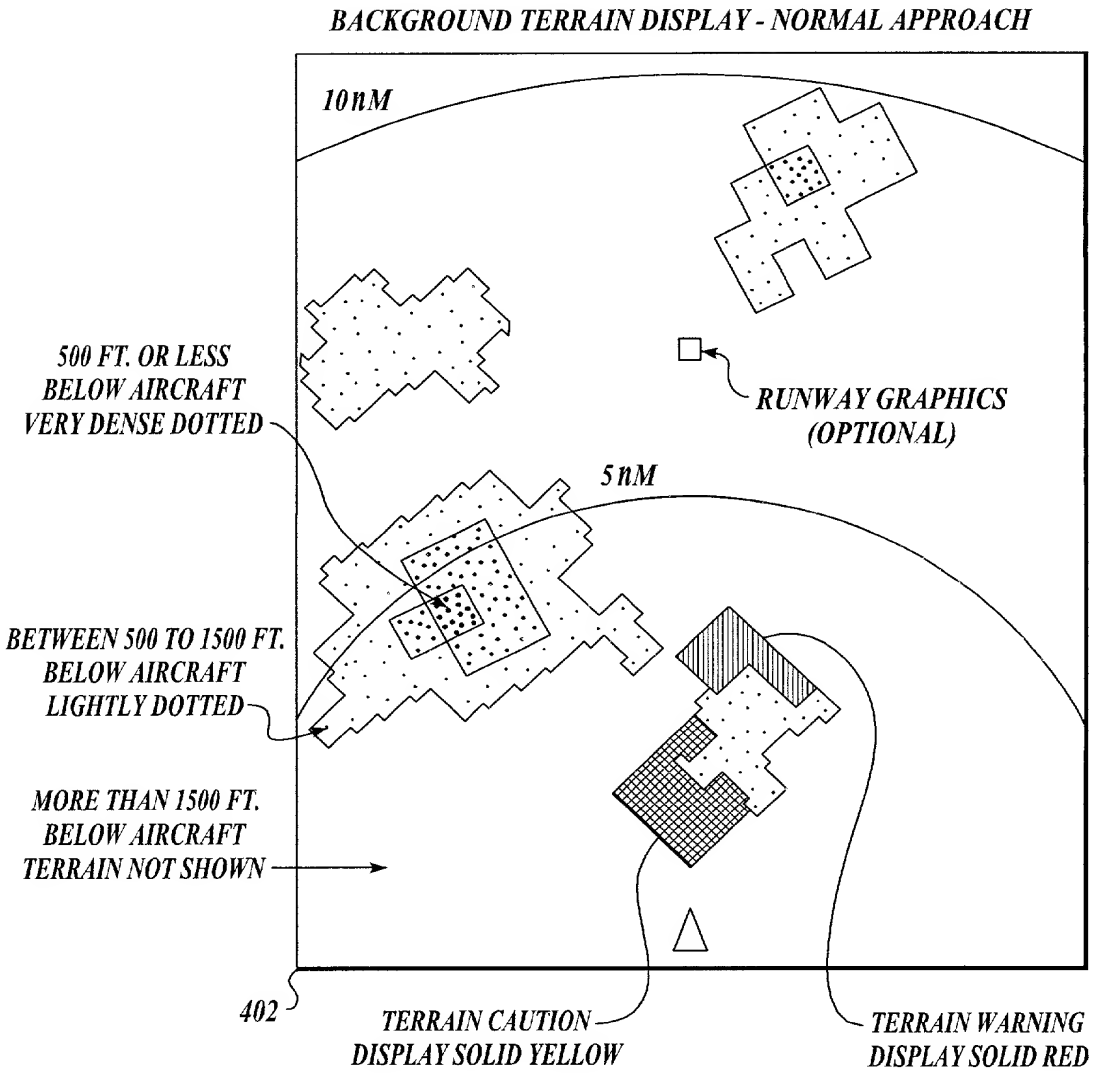

BACKGROUND TERRAIN DISPLAY - NORMAL APPROACH
10nM
5nM
500 FT. OR LESS
BELOW AIRCRAFT
VERY DENSE DOTTED
RUNWAY GRAPHICS
(OPTIONAL)
BETWEEN 500 TO 1500 FT.
BELOW AIRCRAFT
LIGHTLY DOTTED
MORE THAN 1500 FT.
BELOW AIRCRAFT
TERRAIN NOT SHOWN
402
TERRAIN CAUTION
DISPLAY SOLID YELLOW
TERRAIN WARNING
DISPLAY SOLID RED

Fig. 19

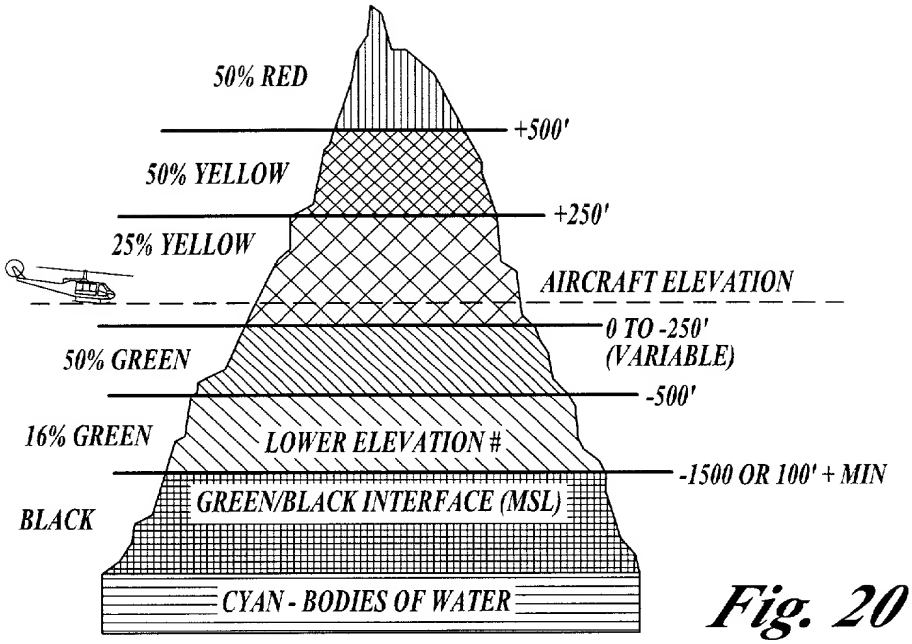

50% RED
+500'
50% YELLOW
+250'
25% YELLOW
AIRCRAFT ELEVATION
0 TO -250'
(VARIABLE)
50% GREEN
-500'
16% GREEN
LOWER ELEVATION #
-1500 OR 100' + MIN
BLACK
GREEN/BLACK INTERFACE (MSL)
CYAN - BODIES OF WATER

Fig. 20

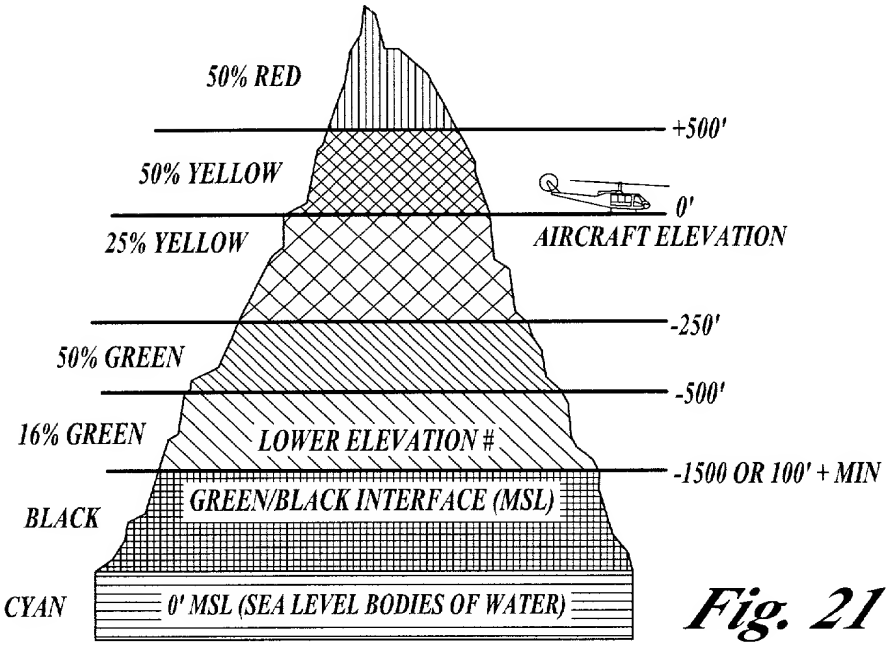

50% RED
+500'
50% YELLOW
0'
25% YELLOW
AIRCRAFT ELEVATION
-250'
50% GREEN
-500'
16% GREEN
LOWER ELEVATION #
-1500 OR 100' + MIN
BLACK
GREEN/BLACK INTERFACE (MSL)
CYAN
0' MSL (SEA LEVEL BODIES OF WATER)

Fig. 21